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April 1944

To: State and Area Supervisors

From: Livestock and Meats Division

Subject: The Livestock and Meat Industry in California.

The livestock and meat industry comprises one of the most important basic industries in California. Variations in production and distribution practices exist because of wide differences in climatic and topographic conditions throughout the State, while population distribution, availability of feed, and other factors influence both the character and extent of the livestock and meat industry.

The variations in production and distribution are not entirely limited to factors within the State, but to the characteristics of the industry in the other 10 Western States. During past years more beef, lamb, and pork has been consumed in California than is produced within the State. Dependence upon these other States as a source of meat products has increased, since local production has not kept pace with increasing population. Due to the heavy influx of population since the beginning of the war, together with such dislocating factors as transportation difficulties, labor shortages, and feed scarcity, careful attention must be given to conditions in States which have contributed to our livestock and meat industry.

Westward Expansion Drove The Livestock Off The Range

Cattle and sheep raising flourished on the open range in California until about 30 years ago. The rapid expansion of population in California has changed from one dominated by agriculture to one by industry. Range lands were converted into farms for the production of grains, fruits, and other crops. This change reduced many large-scale range operations, and set the stage for the development of the dairy industry. Despite the reduction in large scale operations, wide and practical use continues to be made of the native range and pasture resources. However, livestock grazing is being supplemented more and more by feeding and management practices, designed to produce larger quantity and higher quality of meat products.

Significant has been the shift from a surplus position to that of a deficit position with respect to livestock production, due to increasing population. Formerly, surplus beef cattle from the ranges were shipped East during the principal marketing seasons. Only since the close of the last world war has increased demand in the State, together with more widespread practices of finishing cattle, reduced out-of-State shipments to almost a negligible volume. California producers still ship out a large number of early lambs each spring,

but these shipments are more than offset by sheep and lambs coming into the State for breeding and immediate slaughter during other period of the year. The State now ranks as one of the important consuming areas of the Nation, and California stockmen have adequate demands at home for their livestock.

Feed Plays Important Role In Livestock Production

The annual grasses which cover millions of acres of grazing land still furnishes the principal source of feed supply for the range cattle and sheep. These grasses and other plants germinate in the fall after the first rains, and provide the main forage for livestock of California foothills and valley ranges. The period greatest forage production from native vegetation is usually from February to May, and include flowering herbs, grasses, and legumes. In higher ranges and mountain meadows the principal forage consists of perennial grasses, along with sedges and rushes. In some years, particularly when feed is scarce, the acorn crop helps to maintain stock.

The irrigated pastures of alfalfa, sudan, clover and grass are extensively used by stockmen in valley areas. Ladino clover acreage has been greatly extended in recent years, its largest concentration now being in the Oakdale section of Stanislaus County. The popularity of this clover is due to the high carrying capacity for fattening lambs and cattle.

Besides feed on the native range, and feed from field crops, a long list of by-product feeds are used by the stockmen. These include beet pulp, cane molasses, cottonseed and linseed meals, mill feeds, fish meal, and more recently, soy bean meal. Large scale hog ranches located near cities utilize large quantities of garbage, used in conjunction with grains for fattening hogs. Besides feeds produced within the State, substantial tonnages of many feeds are regularly brought in from other States and countries.

Characteristics Of The Beef Cattle Industry

Beef cattle production, as we have seen before, has changed from marketing off pastures and ranges to more feeding of grain and concentrates. This practice has produced a better finished beef animal at lighter weights than formerly. Cattle purchased in other States for further finish are younger and of lighter weight than in earlier years. Adverse feed conditions on the ranges and the shortage of concentrates would materially affect beef production.

Each year from 800,000 to 1,000,000 head of cattle and calves are shipped into California ranges, feedlots, and markets. This supply consists roughly of about 60 percent stockers and feeders, and 40 percent cattle and calves for immediate slaughter. The seasonal movement of these stockers and feeders into the State nearly always reaches its peak in November, but is also large in October and December. On the average, nearly 60 percent of the supply enters the State during these three months, Arizona furnishing approximately one-third of the stockers and feeders, Texas and New Mexico almost another one-third, and Nevada, Utah, and Idaho making up most of the remainder.

The shipment of cattle and calves into the State for immediate slaughter is greatest during the fall, winter, and early spring months. Requirements for outside slaughter animals decline rapidly when local grass cattle become available in the late spring, and reach a seasonal peak in May or early June. Of the total slaughter, outside States have directly supplied about 12 percent during the summer months, and 30 to 40 percent during late fall and winter months. Arizona furnishes around one-third of the cattle and calves for immediate slaughter, Texas and Utah over 27 percent, Nevada and Idaho around 10 percent each, New Mexico, Oregon, Colorado, Montana and Wyoming making up most of the remainder.

The shortage and high cost of feed were the principal reasons for the 17 percent decline in the number of cattle going to the feedlots this winter. This left the largest number of cattle in history on the ranges and farms, and the open winter prevented large livestock casualties. On the other hand, the lack of rain and snow has brought about a backward growing season. Seasonally the grass in California is about 6 weeks late and packers have been forced to go further east for cattle for immediate slaughter. Colorado has furnished west coast packers with about 3 times more cattle than during normal years. This supply is rapidly diminishing, despite the heavy shipments of short-fed cattle to the Denver market from the Nebraska and Kansas feedlots. Our packers will have to go farther east for cattle or turn to those with less finish closer to home. Observers feel cattle slaughter will drop until the grass run gets under way late in June. Marketing of these cattle depends upon the condition of the grass. If there is growing weather during the next 30 days, we can expect fairly orderly marketing. If the grass does not mature, then we may expect the lack of feed to drive them to market.

The Sheep and Lamb Industry

California ranks fourth among the other States in numbers of sheep and in the production of lambs and wool. During the last decade, marketings of sheep and lambs by California operators averaged slightly more than 2,000,000 head each year. Marketings during recent years averaged higher than for any previous period on record, because of good lamb crops and expanding feed operations. However, the backward growing season this winter and spring points to lower marketings since large numbers will not finish beyond feeders.

Marketing of California lambs is heaviest in the spring and summer months, with heavy concentration in April and May. It is during these two months that most of the early lamb crop is marketed out of the San Joaquin, Sacramento, and Imperial valleys. Nearly 70 percent of the California lambs are classed as early lambs for marketing mainly in April, May and June. Unless feed conditions take a change for the better, marketing will be light in the Sacramento Valley during April, and a large percentage will have to be held over for feeders.

Shipment of sheep and lambs into California from outside States is even more pronounced than in the case of beef cattle. Around 1,370,000 head are shipped into the State every year. A larger percentage are slaughter animals for consumption in the State. The balance includes feeder

lambs brought in for further finishing and replacement stock. Shipments increase rapidly after the California crop is exhausted in mid-summer, reaching a peak during September and October.

Shipments have been largest from Idaho, followed closely by those from Oregon, with Utah and Nevada next in importance. Shipments from Oregon have increased in recent years, that State now being the leading outside source of both feeder lambs and replacement stock. Shipments from Idaho and Utah are largest in the late fall and winter months, consisting principally of slaughter lambs.

There are various factors which determine the annual volume of sheep and lambs shipped into California from other States. The annual requirements for large numbers of slaughtering stock have been quite stable. Local feed supplies and prices, competitive demand for lambs from other States, and the financial condition of local producers, are factors during normal times affecting the volume brought into California.

The Hog Industry

California has long produced less pork than is consumed by its people. Marketings by producers are remarkably uniform throughout the year because of the distribution of farrowings and a steady output of hogs from garbage feeders. This latter phase of hog production has developed here to a degree perhaps equalled nowhere else in the country. Of the 800,000 hogs marketed each year in the State, approximately one-third are fed on raw garbage. Production of hogs is important on many farms of the San Joaquin and Sacramento Valleys where feed grains and pastures are usually plentiful. Although during the record marketing of hogs this winter, and the high price of feed, many of the small farmers throughout the State were forced out of business and sent their brood sows to market. There are no indications that the large producers and garbage feeders will liquidate their herds. On the other hand, garbage feeders may increase their herds in view of the increasing amount of garbage available from Army camps and heavily populated areas.

Practically all of the some million head of live hogs shipped into the State are for immediate slaughter, representing nearly 60 percent of the total numbers slaughtered under inspection. In addition to the shipment of live hogs into the State, large quantities of fresh and cured pork products are brought in each year from outside States. The principal States contributing live hog shipments to California are Nebraska, Texas, and Idaho, in the order named. Fewer numbers are brought in from several other States.

California Hub Of Meat Packing In The Western Region

A discussion of livestock production in the Region is necessary to secure a better understanding of the structure of the meat packing industry. We have seen that California depends to a large degree upon the in-shipment of livestock from other states during certain periods of the year. A presentation of the livestock production in each of the States will not only show the relative importance of each State as a producer, but will also show the potential supply for slaughterers in California.

Percent Of Region Production in Each State

<u>State</u>	<u>Cattle and Calves</u>	<u>Sheep and Lambs</u>	<u>Hogs</u>
California	22.7	16.4	34.2
Arizona	11.1	4.3	2.4
Idaho	8.0	9.4	18.5
Montana	17.0	20.5	10.2
Nevada	5.0	4.0	1.0
Oregon	12.2	7.9	10.8
Utah	4.7	13.6	5.9
Washington	7.9	3.2	12.8
Wyoming	11.4	20.7	4.2
Total	100.0	100.0	100.0

California leads the other States in the production of cattle, calves, and hogs. The State ranks third in sheep and lambs. Montana takes second place in cattle production and second in sheep and lamb. Arizona, Oregon, and Wyoming hold relatively the same competitive position in cattle production. Wyoming ranks first and Montana second in sheep and lamb production. Idaho stands second in hog production, with Montana, Oregon and Washington holding about the same competitive position.

Although an important source of supply for California slaughterers, Colorado is not included in the Western Region. The production of beef cattle in Colorado is slightly higher than Montana, the second ranking State in the Region. Sheep and lamb production is about on a par with Idaho, and hog production is just a little higher than in Idaho. Beef cattle production in New Mexico stands just below the production in Montana. Sheep and hog production stand slightly below Utah.

The structure of the packing industry gives an entirely different picture in relation to production. The following table present the position and importance of California in the slaughter of livestock.

Percent Of Region Slaughter In Each State

<u>State</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Species</u>
California	59.4	69.2	67.2	53.6	59.2
Arizona	4.5	1.9	.9	2.2	3.2
Idaho	6.3	4.3	1.1	8.1	6.1
Montana	3.0	2.1	.6	3.5	2.8
Nevada	1.0	1.0	.8	1.4	1.1
Oregon	6.6	6.6	2.0	8.8	6.8
Utah	2.1	3.0	.9	1.2	1.8
Washington	16.8	11.6	26.4	20.7	18.5
Wyoming	.3	.3	.1	.5	.3
Total	100.0	100.0	100.0	100.0	100.0

California has almost 60 percent of the total slaughter in all species as represented by the quota bases. The total cattle slaughter is likewise almost 60 percent of the Region, and the calf slaughter more than

69 percent. Lamb slaughter reaches a total of more than 67 percent of the entire Region and almost 54 percent of the hog slaughter. The only other State that comes even near challenging the slaughter position of California is Washington. The slaughter in this State is fairly evenly divided between cattle, sheep and hogs.

The Meat Packing Industry In Northern California

The structure of the meat packing industry in Northern California is characterized by specialization in relation to the topographic conditions and distribution of population. Packing plant operations are geared to serve highly concentrated populated areas in the different parts of Northern California. The production and distribution of these plants are in general limited to the trading areas of these populated centers. There are no heavy car route operations into the outlying territories which is a common practice in the eastern States. Since the consumers in these basic trading areas depend upon strategically located plants, any degree of dislocation in their operations would create a chaotic condition.

These plants for the most part are engaged simply in the slaughter of livestock and the distribution of whole carcasses. Their facilities, consequently, are limited to slaughter space and to coolers adequate to chill the carcasses prior to delivery. Plants having almost 80 percent of the slaughter capacity in Northern California do not have refrigeration facilities to hold the carcasses beyond the chill period. Two plants in the San Francisco Bay area have more than 99 percent of the sharp freezer capacity of the entire industry in Northern California. Very few of them even have the facilities for processing meat products, beyond breaking a small percentage of the production into wholesale cuts. Sharp freezing, fabricating, and processing facilities are generally to be found in the wholesale meat establishments and the National Packers in the San Francisco Bay Area.

Slaughtering facilities in Northern California are almost entirely in the hands of independent operators who purchase a large share of their livestock direct from the producers for immediate slaughter or further finishing. Some of them maintain their own feed lots and others obtain their finished animals from commercial feed lots. These packers by virtue of their operations in 1941 have almost 48 percent of the quota bases in beef of the entire State. The National Packers in this part of the State have only approximately one-half of 1 percent of the quota bases in beef. The entire calf slaughter is concentrated in the hands of independent packers who account for almost 44 percent of the quota bases in the State. This slaughter to a large degree is found in small non-Federal inspected plants located in the dairy and beef cattle producing sections in the hinterland of Northern California. These plants slaughter the calves and deliver a large share of the carcasses to wholesalers in the Bay Area for distribution to retailers, hotels, and restaurants.

The independent operators continue to hold their grip on slaughter operations by having a little more than 41 percent of the lamb quota

bases of the State. The National Packers move into the lamb operations with almost 14 percent of the quota bases. They continue to hold their own in the slaughter of hogs with a little over 18 percent of the State's quota bases on this class of livestock. Because very few of them developed processing operations, the independent group have only a little more than 27 percent of the hog quota bases. We have seen, therefore, that Northern California is not only dominated by independent packers, but 48 percent of the quota bases in all species of livestock are located in this part of the State.

The Meat Packing Industry in Southern California

The structure of the meat packing industry in Southern California is characterized by the high concentration of operations in contrast to decentralization in the northern part of the State. Slaughter operations representing 52 percent of the entire State are not only carried on in a relatively few plants, but 95 percent of the quota bases in all species of livestock is centered in Los Angeles County. The National Packers play a more important role in this part of the State, and follow to some degree methods of distribution found along the river markets in the mid-west. The independent packers on the whole follow the methods of similar establishments in the North. Most of them are engaged in the slaughter and distribution of the whole carcass, leaving the processing to National Packers, wholesalers, and meat processing plants.

The meat packing establishments purchase a large share of their livestock direct from the producer, commercial feedlots, and their own feeding operations. The stockyards, however, play a more important role in this part of the State. Located near the packing plants in Los Angeles County, many of the operators depend upon the offerings of the yard which runs heavily to cows. These packers in this part of the State by virtue of their operations in 1941 have almost 52 percent of the quota bases in beef of the entire State. In contrast to the North, independent packers have only 33 percent of the quota bases in beef, and the National Packers 18.5 percent. The calf slaughter follows the same general pattern of distribution between the two types of operators. The independent's have only 17.5 percent of the quota bases of the State, and the National Packers are in an important position with almost 39 percent of the State's total.

Distribution Of Quota Bases in Northern and Southern California (Percentages by weight)

<u>Northern California</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Classes</u>
Independent Packers	47.8	43.8	41.2	27.2	41.2
National Packers	6.6	-	13.7	18.3	6.8
Total	48.4	43.8	54.9	45.5	48.0

Southern California

Independent Packers	33.0	17.5	17.9	24.0	27.5
National Packers	18.5	38.7	27.2	30.5	24.5
Total	51.6	56.2	45.1	54.5	52.0

The independent operators continue to lose their position in the slaughter of sheep in Southern California, as revealed by the above chart. These packers have only 17.9 percent of the State's total quota bases as compared with 27.2 percent for the National Packers; while in the North, they have 41.2 percent as against 13.7 for the National Packers. The independent packers in Southern California are able to hold their own with the North on hogs with 24 percent; however, the National Packers in the South move to a commanding position with 30.5 percent. We have seen, therefore, that the National Packer dominates the slaughtering operations in Southern California with the exception of beef, while in the North independent operators dominate in all classes of livestock. Even more important, these independent operators in the North have a much larger percentage of the quota bases than the National Packers in the South, with the exception of hogs.

Redding Area

This area is considered by marketing analysts as the North Central and Northeast district of the State. The Southwest boundary of the area borders on the northern end of the Sacramento Valley. The area produces 15 percent of the beef cattle in the State of California, 8 percent of the hogs, and 13 percent of the sheep and lambs. Beef cattle production is most important in Modoc, Siskiyou, Lassen, Shasta and Tehama counties. Sheep production is most important in Tehama County, accounting for almost 60 percent of the entire Redding Area, with Lassen, Modoc, and Siskiyou counties making up most of the remainder. Hog production is centered in and spread fairly evenly throughout Tehama, Shasta, and Siskiyou counties.

Bordering on the State of Oregon, this Area is mountainous and rugged, with many narrow valleys which are partly used in producing grain and hay. A great deal of the Area is in national forests, a part of which furnish good grazing for livestock. These conditions, along with low summer rainfall, limit the extent and carrying capacity of grazing lands. Nevertheless, range cattle and sheep production dominate the agriculture picture.

The winters are cold, necessitating maintenance feeding of most stock animals. Cattle are marketed mainly from August through December, some directly off grass both for slaughter and as feeders, while some are finished on hay and grain. Lambs are dropped early in the spring, and marketed during August and September. Hog production is not of major importance and is carried on mostly as a sideline to farming and ranching. Crop production is confined mainly to the irrigated valleys and where hay is the leading crop. Substantial quantities of wheat, barley, and oats are also grown.

This background of livestock production provides the tools to measure the importance of the slaughter operations in the Area. Like other parts of the State, this Area is a source of livestock for bordering and more distant Areas.

Percent Of State Quota Bases In The Area

(Conversion Weight Basis)

<u>No. Slaughterers</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Species</u>
28	1.6	2.0	.05	1.4	1.5

There are 28 slaughterers in the Area, with a total quota base of 14,700,496 pounds of dressed meat. Seven of the plants are either Class 1 or 2A slaughters, six of them located in Siskiyou County and the other in Tehama. The leading county in meat production is Tehama with a total quota base of more than 5 million pounds, with a Class 1 plant accounting for almost 90 percent of its production. Siskiyou County with the largest number of plants is next in importance. Shasta County holds third place in production, with Lassen and Plumas next in line. The remaining counties are of little consequence as far as slaughtering is concerned. The Area stands low in slaughter operations when compared with the State as a whole. Only 1.5 percent of the State's quota bases being located in the Redding Area.

The distribution of the quota bases by the different species of livestock will not only show a difference as between counties, but between the Areas. Some counties and Areas will show a high percentage of cattle, while others will show a high concentration of hogs.

Percent Distribution of Quota Bases by Species
(Conversion Weight Basis)

<u>County</u>	<u>No. Plants</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>
Sierra	1	64.9	20.6	-	14.5
Siskiyou	9	61.2	12.2	3.2	22.5
Trinity	3	85.7	14.3	-	-
Modoc	2	53.1	4.7	3.6	38.6
Shasta	2	54.2	7.1	2.8	35.9
Lassen	2	51.0	10.3	4.7	34.0
Plumas	4	67.1	7.7	2.7	22.5
Tehama	5	55.3	16.4	5.7	22.6
Area Average	28	57.2	11.8	4.3	26.7

A close examination of the above table reveals that the quota bases in the Area show a relatively high percentage of cattle. Trinity County ranks first as to the distribution of cattle. Lassen stands at the bottom, but moves near the top on hogs. Most of the counties showing a relatively low concentration of cattle in the quota bases, stand very high in hogs. Calves are fairly evenly distributed in all counties, except Modoc, Shasta, and Plumas. The importance of slaughter operations in Tehama County is responsible for the small showing made for sheep and lambs.

Since the Redding Area is comprised of parts of other basic trading areas, consideration must be given to the probable shipment of meat products to and from the Area. Furthermore, a more detailed picture should be given to show the shifts in population in each of the counties in order to have a better understanding of the problems of equitable distribution of meat products.

Relationship Of Quota Bases In The Area to Population

<u>County</u>	<u>Population</u> <u>Nov. 1, 1943</u>	<u>Percent Change</u> <u>Population Since</u> <u>April 1, 1940</u>	<u>Conversion</u> <u>Weight of</u> <u>All Species</u>	<u>Apparent Per</u> <u>Capita Weekly</u> <u>Supply by Lbs.</u>
Sierra	1,753	-42.0	75,023	.82
Siskiyou	35,049	+22.6	3,465,911	1.90
Trinity	2,327	-41.4	53,700	.44
Modoc	14,259	+63.7	838,100	1.13
Shasta	26,593	-7.7	2,311,691	1.67
Lassen	16,458	+13.7	1,311,463	1.54
Plumas	9,874	-14.5	1,369,584	2.66
Tehama	12,661	-11.6	5,275,024	8.00
Total	118,974	+5.0	14,700,496	2.36

When quotas were put into effect, many of the larger packers withdrew from their extended trade territory and concentrated their restricted production closer to heavy centers of population. This withdrawal from the market placed many small communities in a critical position as to their supply of fresh meat products. Local slaughterers in many cases did not have sufficient 1941 slaughter history to meet the acute shortages which developed. To alleviate the situation, quota increases were given to a number of the small plants. However, this was not extensive enough in scope to meet the outstanding ration points. Nevertheless, the extremely low apparent per capita weekly supply in such counties as Sierra and Lassen, and the high per capita supply in Tehama County demand some clarification.

As pointed out before, such counties as Sierra, the eastern part of Plumas, and Lassen, do not logically belong to the Redding Area. These counties are a part of the Northeast district of the State, and belong to the basic trading area which is served by Reno, Nevada. Nevada Packing Company and others, in Reno, deliver meat products to these counties. There is also a limited distribution to Modoc County; however, this County logically belongs to the Klamath Falls, Oregon, basic trading area. Trinity County by virtue of its location falls into the Santa Rosa Area, and would have to look toward such counties as Humboldt to supplement its meat supply. Tehama County, located at the upper end of the Sacramento Valley, with a high per capita supply, finds outlets in Shasta County and in the northeast counties of the Sacramento Area. Since this Area is for the most part agricultural, the meat supply is further strengthened by farmers and ranchers slaughtering for their own consumption.

Santa Rosa Area

This Area is generally referred to as the North Coast and the extreme north end of the Central Coast District of the State. This Area has about 7 percent of the beef cattle of the State, 8 percent of the hogs, and 20 percent of the sheep and lambs. Beef cattle production is most important in Solano, Humboldt, and Mendocino counties. Sheep production is centered mostly in Mendocino, Solano, Humboldt, and Sonoma counties. Sonoma and Mendocino are the leading

counties in hog production. The northern half of the Area is mostly mountainous, and much of it is covered with timber and brush, leaving very little agricultural land, except in some of the counties to the south. Production of hay and concentrates is insufficient for its livestock. Range feed generally matures during the summer. Range cattle and lambs are marketed off the grass during the summer, many of them being sold as feeders.

Although slaughter operations are relatively important in this Area, facilities are heavily concentrated in those counties located nearest the San Francisco Bay area. The following table shows the percent of State quota bases in the Santa Rosa Area.

Percent Of State Quota Bases In The Santa Rosa Area
(Conversion Weight Basis)

<u>No. Slaughterers</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Species</u>
58	4.6	5.3	6.5	2.3	4.2

There are 58 slaughterers in the Area, with a total quota base of 43,435,897 pounds of dressed meat. Five of the plants fall in the Class 1 and 2A group and account for almost 70 percent of the total quota bases. The leading county in meat production is Solano with a total quota base of more than 27 million pounds, with the three Class 1 and 2A plants accounting for almost the entire amount of its production. Sonoma County with 11 plants is next in importance with a total of almost 5 million pounds. Humboldt follows closely with a single Class 2A and nine 2B slaughterers with a total of more than 4 million pounds. Napa county with its 6 plants is next in line with almost 4 million pounds. The remaining counties are of little consequence, most of them being located in the northern end of the Area and catering to the local trade.

The distribution of quota bases by different species of livestock does not follow the same pattern as the Redding Area. Production of livestock in some of the counties appears to have a great influence on the distribution of quota bases by different species.

Percent Distribution of Quota Bases by Species
(Conversion Weight Basis)

<u>County</u>	<u>No. Plants</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>
Del Norte	4	53.7	19.5	3.1	23.7
Humboldt	10	71.5	9.4	6.4	12.7
Mendocino	10	52.5	18.7	8.7	20.1
Lake	3	69.9	9.7	9.4	11.0
Sonoma	11	36.7	24.3	5.1	17.0
Napa	6	48.4	8.3	10.3	33.0
Solano	5	62.2	4.3	22.5	11.0
Marin	9	3.2	95.7	1.0	1.1
Area Average	58	57.0	10.9	17.4	14.7

Sheep assume a more important role in the quota bases, and hogs move down to a minor position. Cattle move down below the Area average in Del Norte, Mendocino, Sonoma, Napa, and Marin counties. Calves take up the slack in Sonoma and Marin, both of them participating in the heavy supply offered by the dairy farms in the vicinity. Napa County offsets the low cattle distribution by a heavy kill in hogs, many of them being garbage feds. Del Norte and Mendocino counties offset their low beef average by heavy slaughter of calves, consisting of range and dairy stock. The heavy slaughter of sheep and lambs in the three Class 1 and 2A plants located in Solano County was instrumental in the high distribution average for this class of live-stock.

Because the Santa Rosa Area extends south to the basic trading area of the San Francisco Bay district, quota bases will require a careful analysis in relationship to heavy centers of population. The following table presents in detail population changes and the apparent per capita supply in each of the counties.

Relationship Of Quota Bases In The Santa Rosa Area To Population

County	Population	Percent Change	Conversion	Apparent Per
	Nov. 1, 1943	Population Since April 1, 1940	Weight of All Species	Capita Weekly Supply By Lbs.
Del Norte	3,461	- 27.1	277,798	1.54
Humboldt	44,106	- 3.5	4,352,157	1.90
Mendocino	24,514	- 11.9	1,687,644	1.32
Lake	7,440	- 7.8	264,314	.69
Sonoma	73,002	+ 5.7	4,973,997	1.31
Napa	39,320	+ 38.0	3,674,971	1.79
Solano	95,615	+ 102.8	27,661,614	5.55
Marin	64,669	+ 44.5	743,402	2.21
Total	352,127	+ 27.6	43,435,897	2.36

The Santa Rosa Area can logically be split into two separate economic units for the purpose of discussing the slaughter structure and distribution pattern of the industry. Del Norte, Humboldt, Mendocino, and Lake counties comprise the northern half of the Area; and Sonoma, Napa, Solano, and Marin counties constitute the southern half which is definitely influenced by the heavily populated Bay Area. Most market analysts consider Solano and Marin a part of the San Francisco Bay area, and consider the Bay area an important outlet for the commodities of Sonoma and Napa counties.

The northern half of the Area lost population since April 1, 1940, while the counties in the lower half has increased. Showing the largest increase, Solano County is also the most important in meat production. The apparent per capita supply is more than 5 pounds per person a week, while the other counties range from .69 pounds in Lake to 2.21 in Marin. The proximity of Solano to the Bay area makes feasible that a share of its meat production shall move into the jobbing and retail channels in San Francisco, Oakland, and other leading cities. The low per capita supply in Lake County is supplemented from the counties to the south. With the exception of Solano County, the apparent per capita supply is fairly evenly distributed throughout the Area.

Sacramento Area

Most of the Area lies in the Sacramento Valley floor, except the counties to the east bordering on the State of Nevada. These counties are considered that part of the Sierra Mountain district which is mountainous and rough, with extremes in elevation. Very little of the land in these counties is suitable for agricultural pursuit, and livestock grazing is limited. The other counties lying in the valley proper are devoted to crop production, mostly barley, wheat, oats, hay, rice, sugar beets, and fruits and vegetables. However, large areas in the valley itself and in the surrounding foothills are used for pasture which is at its best during the period from October through May.

The Area ranks first in sheep production, with 28 percent of the State's total. Glenn County leads the others with a total of almost 230,000 head. Colusa is second with 156,000 head, and Yolo third with 128,000. The other counties range from 80,000 head in Butte, 66,000 in Sutter, 46,000 in Sacramento, 42,000 in Placer to as low as 2,800 in Alpine. The sheep graze on valley farms and ranches, and on the bordering foothill ranges, while some bands are taken to mountain ranges in the summer. Lambs are dropped in early winter months and the bulk of them go to market during April and May. The large acreage of grain stubble, beet tops, and other field grains furnish a major part of the pasture for sheep in the summer and fall.

Beef cattle production, with 8 percent of the State's total, is important in several localities, mainly where adjacent foothill range land is available. Sacramento County leads with almost 20,000 head. Amador is second with 16,000 head, Butte is third with 15,800 head, and Colusa fourth with 12,000 head. The number of head is spread fairly evenly over the remaining counties. A large number of cattle are finished for market in large-scale feeding plants on beet tops and other field grains. Many cattle in these feedlots are brought in from other parts of the State or bordering States. Hog production is important with 19 percent of the total, particularly in those counties where grains and other feeds are abundant.

The Area is one of the more important in slaughtering facilities, with heavy concentration in a few counties. The following table presents the percent of the State quota bases in the Sacramento Area.

Percent Of State Quota Bases In The Area
(Conversion Weight Basis)

<u>No. Slaughterers</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Species</u>
55	9.4	2.9	4.8	4.2	7.2

There are 55 slaughterers in the Area, with total quota bases of 76,702,521 pounds of dressed meat. Ten of the plants fall in the Class 1 and 2A group and account for 84 percent of the total quota bases. The leading county in meat production is Sacramento with a total quota base of more than 30 million pounds. Second in importance is Yolo with quota bases of almost 21 million pounds. Yuba ranks third with almost 14 million pounds. These three counties

account for more than 84 percent of the entire quota bases in the Area. The large production in these three counties is performed in 19 plants.

The distribution of quota bases by different species is important, particularly in those counties responsible for the major share of the slaughter. The proximity to the San Francisco Bay Area appears to have a direct bearing on this distribution.

Percent Distribution Of Quota Bases By Species
(Conversion Weight Basis)

<u>County</u>	<u>No. Plants</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>
Glenn	3	53.4	13.8	4.7	28.1
Butte	7	60.8	9.3	4.3	25.6
Colusa	6	80.1	15.5	6.2	15.2
Yolo	7	55.3	16.4	5.7	22.6
Yuba	4	71.9	8.0	11.5	8.6
Sutter	2	58.5	25.4	1.3	14.8
Sacramento	8	80.3	3.3	6.8	9.6
Amador	3	50.0	20.8	6.8	22.4
Nevada	4	73.5	16.8	9.3	.4
Placer	5	46.4	18.1	4.5	31.0
Elderado	6	61.0	12.6	3.6	22.8
Alpine	-	-	-	-	-
Area Average	55	69.7	3.5	7.6	19.2

This area is one in which beef slaughter dominates. Sacramento County with the largest quota bases in the Area shows that more than 80 percent of it is cattle. These cattle are mostly steers and heifers and representsome of the highest quality animals in the State. Yolo County next in line in quota base importance has a more balanced distribution of the different species. This county is located closer to the production centers of the different species of livestock. Yuba, next in quota base importance, follows closely the distribution pattern of Sacramento County. The calf quota bases are fairly evenly distributed over all the counties, excepting those heavily weighted with cattle. There is also an even distribution of the sheep quota with the exception of Sutter and Yuba counties. Hogs have a good distribution, excepting in Yuba, Sacramento, and Nevada counties.

The Sacramento Area presents some interesting distribution problems. Although nearly all of the counties have lost in population, the increase of population in the Bay Area has a direct bearing on slaughter operations in the Sacramento valley. The table that follows analyzes the relationship of quota bases in the Area to population.

Relationship Of Quota Bases In The Area To Population

<u>County</u>	<u>Population</u> <u>Nov. 1, 1943</u>	<u>Percent Change</u> <u>Population Since</u> <u>April 1, 1940</u>	<u>Conversion</u> <u>Weight of</u> <u>All Species</u>	<u>Apparent Per</u> <u>Capita Weekly</u> <u>Supply by Lbs.</u>
Glenn	10,966	- 10.1	866,964	1.52
Butte	42,054	- 1.8	5,572,485	2.54
Colusa	8,881	- 9.3	432,906	.94
Yolo	27,813	+ 2.1	20,753,286	4.35
Yuba	18,140	+ 6.5	13,985,847	4.81
Sutter	17,947	- 3.9	347,028	.37
Sacramento	188,168	+ 10.8	30,268,904	3.09
Amador	6,337	- 29.4	348,204	1.04
Nevada	13,693	- 29.0	1,921,638	2.69
Placer	24,910	- 11.4	1,443,893	1.11
Eldorado	9,961	- 24.7	761,366	1.46
Alpine	216	- 33.1	-	-
Total	369,086	+ 1.03	76,702,521	4.00

Every county in the Area, with the exception of Alpine, comprises the basic trading area of the Sacramento Valley. Alpine County does not have any slaughter facilities and is considered a part of the Reno, Nevada basic trading area. Those counties with a low apparent per capita supply of meat products receive their additional supply from the bordering counties. The high apparent per capita supply for the Area as a whole is due to the large supplies shipped into the San Francisco Bay Area. Historically, the Bay area has looked to the Sacramento valley for a part of its supply of meat products. At the present time, one plant in Reno, Nevada ships almost its entire supply into the Oakland district.

San Francisco Area

The 3 counties comprising this Area are the hub of the San Francisco Bay Area. Alameda and Contra Costa counties are the only ones important in livestock production, which is limited to a combination of grazing and feedlot operations. The Area has about 4 percent of the cattle and calves in the State, with about 70 percent of them concentrated in Alameda. Hog raising is unimportant in this Area, accounting for about 1 percent of the State's production. Sheep and lambs are equally unimportant and account for 2 percent of the total, and are distributed rather evenly between Contra Costa and Alameda counties.

Slaughtering operations are very important, and many of the present plants began business during the pioneering days in California. Like the other plants in northern California, most of them are engaged in straight slaughter operations, leaving the processing to the wholesale and jobbing establishments.

Percent Of State Quota Bases In The Area
(Conversion Weight Basis)

<u>No. Slaughterers</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Species</u>
21	14.7	5.1	20.0	8.7	12.9

There are 21 slaughterers in the Area, with a total quota base of 134,332,018 pounds of dressed meats. Ten of the plants are either Class 1 or 2A, and they account for more than 128 million pounds of the entire quota bases. San Francisco County leads the others in meat production, the 7 Class 1 and 2A plants having more than 111 million pounds of the total quota bases. The Area ranks high in the slaughter of cattle and sheep, while calves and hogs are in a very minor position.

Since this Area is located in the most heavily populated center in Northern California, the distribution of the quota bases by the different species will show a relatively balanced ratio.

Percent Distribution Of Quota Bases By Species
(Conversion Weight Basis)

County	No. Plants	Cattle	Calves	Sheep	Hogs
San Francisco	8	60.1	3.1	17.5	19.3
Contra Costa	4	83.8	7.3	2.0	6.9
Alameda	9	62.4	5.2	18.2	14.2
Area Average	21	60.5	3.6	17.5	18.4

The average of the Area is weighted by the distribution in San Francisco County, because of a large majority of the quota bases belong to the slaughterers in that county. Calves are low because heavy shipments are brought into the Bay Area from small slaughterers in the hinterland. This has been a customary practice for many years, the San Francisco slaughterers having made little attempts to develop the calf trade. Hogs are relatively important to the Area, however, the production is just across the line in San Mateo County.

The relationship of the quota bases in the Area to the population will show the influence of meat shipments from the bordering Areas.

Relationship Of Quota Bases In The Area To Population

County	Population Nov. 1, 1943	Percent Change Population Since April 1, 1940	Conversion Weight Of All Species	Apparent Per Capita Weekly Supply By Lbs.
San Francisco	685,951	8.7	112,267,617	3.15
Contra Costa	218,690	117.7	1,861,682	1.63
Alameda	621,485	21.3	20,182,719	.61
Total	1,526,126	23.0	134,332,018	1.65

This Area has had an appreciable increase in population, particularly in Contra Costa County. Despite the increase of population in San Francisco County the apparent per capita supply is well above the average, although a share of the meat goes into Contra Costa, Alameda and San Mateo counties. We have already seen that the Sacramento Area contributes to Alameda County, and a discussion of the San Jose Area will reveal the movement of meat products to the same county. This shipment of meat products from the outside areas places the San Francisco Area in a good supply position.

Stockton Area

The Stockton Area is located in the northern half of the fertile San Joaquin Valley. The eastern half of the Area lies in the valley floor, and the western half borders and extends into the Sierra mountain range. There is great variation between sections in quality and quantity of pasture and agricultural pursuit. The counties to the east are highly productive, while those bordering on the mountainous country are not suitable for farming, but important in grazing during the spring and summer months. Parts of the Area have extensive irrigated lands which play an important role in livestock production. The importance of irrigation increases in the southern half of the San Joaquin Valley because of insufficient rainfall.

The Area is not as important in livestock production when compared with the lower end of the Valley. Beef cattle production centered in Stanislaus and Merced counties, the area representing about 13 percent of the State's supply. Sheep production important in San Joaquin, Stanislaus, and Merced counties, contributes to the spring lamb crop in April and May, the area having slightly less than 8 percent of the State's total. Hogs are more numerous in San Joaquin and Merced counties where grain supplies are more abundant, the area representing more than 8 percent of the State's supply. Calves are plentiful in the dairy section of the Area.

The Area is important in slaughtering facilities which, however, hold a minor position when compared with the facilities in most of the bordering Areas.

Percent Of State Quota Bases In The Area (Conversion Weight Basis)

No.	Slaughterers	Cattle	Calves	Sheep	Hogs	All Species
55		4.0	11.2	14.1	2.0	3.9

There are 55 slaughterers in the Area, with total quota bases of 39,967,505 pounds of dressed meats. Seven of the plants are in the Class 1 and 2A group and account for 75 percent of the total quota bases. The leading county in meat production is Stanislaus which has a little more than 50 percent of the total Area. Outside of the Los Angeles and Fresno Areas, Stockton has the largest percentage of the quota base in calves. The 2B quota bases are mostly distributed among the 36 plants in Merced and San Joaquin counties.

The distribution of quota bases by different species shows calves holding a high percentage in this Area. The heavy demand on the part of wholesalers in the San Francisco Bay Area has a direct bearing on this high calf concentration.

Percent Distribution Of Quota Bases By Species
(Conversion Weight Basis)

<u>County</u>	<u>No. Plants</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>
San Joaquin	23	69.3	14.6	4.1	12.0
Stanislaus	9	53.6	36.6	11.9	14.8
Merced	16	35.0	60.8	.1	4.3
Calaveras	5	60.0	22.4	8.1	9.5
Tuolumne	2	54.2	23.6	6.5	15.7
Mariposa	-	-	-	-	-
Area Average	55	56.4	25.5	4.1	14.0

More than 60 percent of the quota bases in Merced County is comprised of calves. Stanislaus is also important in calf distribution, although its heavy kill in beef tends to offset its strong calf position. San Joaquin County has the highest distribution in beef cattle by virtue of its minor importance in sheep and lambs. Merced has one of the lowest distribution on cattle because of the high position of calves. Sheep distribution is highest in Stanislaus County and of no importance in Merced County. Hog distribution is spread fairly evenly over the counties with the exception of Merced.

The Stockton Area shows very little dislocation of meat supply in relation to population changes, although decreases in population in some of the counties have improved the apparent per capita supply.

Relationship Of Quota Bases In The Area To Population

<u>County</u>	<u>Population</u> <u>Nov. 1, 1943</u>	<u>Percent Change</u> <u>Population Since</u> <u>April 1, 1940</u>	<u>Conversion</u> <u>Weight Of</u> <u>All Species</u>	<u>Apparent Per</u> <u>Capita Weekly</u> <u>Supply By Lbs.</u>
San Joaquin	151,805	+ 13.1	11,915,625	1.50
Stanislaus	81,348	+ 8.7	20,456,878	4.82
Merced	46,632	- 12.8	6,299,506	2.59
Calaveras	6,385	- 22.3	471,004	1.42
Tuolumne	8,360	- 23.2	824,492	1.89
Mariposa	3,112	- 44.5	-	-
Total	297,642	+ 6.0	39,967,505	2.57

As a result of the increase in population in San Joaquin and Stanislaus counties, the area as a whole has shown a moderate gain. The other counties have lost population, improving their per capita supply of meat products. Stanislaus has the largest apparent per capita supply. This county as well as Merced moves a large amount into the Bay Area. On the whole, this Area because of its location and nearness to supply of livestock is in good shape relative to its supply of meat products.

Fresno Area

The southern half of the San Joaquin comprises the Fresno Area, perhaps with the exception of Mono County and to some extent Inyo. The Area borders on the Sierras and extends into the foothills to the

Coast and Tehachapi Ranges. Kern County at the southern end of the Area, falls into the belt having a low rainfall. The whole valley produces tremendous quantities of grains and hay, so that feed resources during normal times are in excess of the requirements.

Beef cattle production is flexible and many types and combinations of operations are found in this part of the valley. There are large-scale outfits, a few large finishing feedlots, and many small farm and ranch concerns. Although the district has many producing herds, nevertheless many thousand head of feeder cattle and calves are brought in from other sections of the State and bordering States. Many cattle are sold off grass for immediate slaughter during May and June, but as in other parts of the State there has been a trend toward giving strictly grass cattle a short finishing feed. The Fresno Area leads the other Areas with 23 percent of the State's beef cattle production. Kern County, leading all the other counties in the State, produces around 124 thousand head, with Tulare ranking second, with more than 116 thousand head.

In the production of sheep, Kern ranks first and Fresno County ranks fourth in the State, and produce a large number of the early spring lambs. Sheep are raised in the valley itself, in the adjacent foothills and mountains, and some are grazed during the spring on the desert ranges of eastern Kern County and adjoining areas. The sheep and lambs move over into the Mojave Desert in March, and the lambs needing further finishing are moved off the desert in the summer up into the foothills of Mono and Inyo counties. This Area has 20 percent of the sheep in the State which are heavily concentrated in Kern and Fresno counties. Hogs are important with about 16 percent of the State's total, with Tulare, Fresno, and Madera the leading counties of the Area.

The slaughter structure does not follow the production importance of the Fresno Area. Cattle and calves hold their own with similar areas, however, sheep hold rather a minor position.

Percent Of State Quota Bases In The Area
(Conversion Weight Basis)

<u>No. Slaughterers</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Species</u>
40	6.5	12.3	1.5	4.5	5.9

There are 40 slaughterers in the Area, with total quota bases of 57,375,082 pounds of dressed meat. Twenty-one of the plants are either Class 1 or 2A, and account for almost the entire slaughter. The remaining 19 plants are small and scattered unevenly over the Area. Kern County has only one of the Class 1 and 2A type of plants but this single plant has about a third of the total quota bases of the entire Area. Seven of the same type of plants are located in Fresno County and account for almost another third of the quota bases. Tulare and Madera counties are responsible for most of the remaining quota bases. Fresno, Tulare, Kings and Kern counties in the order named have almost the entire calf quota.

Similar to the Stockton Area, several of the counties show a high distribution of calf quota in comparison with the other species. Each county shows rather an uneven distribution of quota bases as between the different species.

Percent Distribution Of Quota Bases By Species
(Conversion Weight Basis)

County	No. Plants	Cattle	Calves	Sheep	Hogs
Madera	4	42.4	4.8	1.0	51.8
Fresno	9	63.0	20.1	1.3	15.6
Mono	-	-	-	-	-
Inyo	8	66.7	10.8	10.2	12.3
Kings	9	46.7	41.1	1.5	10.7
Tulare	8	47.2	26.2	1.7	24.9
Kern	2	68.4	6.4	6.5	18.7
Area Average	40	58.3	18.2	2.8	20.7

The heavy beef slaughter in Fresno and Kern counties is responsible for the maintenance of the relatively high distribution of cattle in the quota bases. The other counties, with the exception of Inyo fall well below the average cattle distribution. The low position of cattle in Madera County is offset by the high distribution of hogs, the highest in the Area. Kings County shows the highest distribution in calves which is responsible for the low rating on cattle. Calves and hogs in Tulare County have the advantage of distribution of quotas at the expense of beef. Sheep with the exception of Kern and Inyo are spread rather evenly over all of the counties.

The southern half of the San Joaquin Valley shows some differences in population changes and the apparent per capita supply of meat products. However, a discussion of the characteristics of the distribution will reveal little dislocation has taken place in the Fresno Area.

Relationship Of Quota Bases In The Area To Population

County	Population Nov. 1, 1943	Percent Change Population Since April 1, 1940	Conversion Weight Of All Species	Apparent Per Capita Weekly Supply By Lbs.
Madera	25,003	+ 7.2	4,796,704	3.69
Fresno	194,652	+ 9.0	18,328,576	1.81
Mono	931	- 59.5	-	-
Inyo	16,978	+122.7	358,341	.40
Kings	34,397	- 2.2	5,416,954	3.01
Tulare	108,283	+ 1.1	12,365,093	2.19
Kern	141,541	+ 4.7	16,609,234	2.25
Total	521,785	+ 6.4	57,375,082	2.13

Mono and Inyo counties in line with basic trading area distribution, do not belong in the Fresno Area. Mono County, although without slaughtering facilities, belongs to the basic trading area served by

Reno, Nevada. For the same reasons Inyo belongs to the area served by Los Angeles. The remaining counties fall naturally into the Fresno basic trading area, although the distribution of meat products in Kern County is influenced by the nearness of the Los Angeles metropolitan area.

Fresno County with the largest tonnage of meat products on the basis of quota bases, stands below the average apparent per capita weekly supply of the Area as a whole. This apparent shortage is supplemented to some degree by supplies from Madera and Merced counties. Kings County contributes to a small degree to Fresno and the northern corner of Kern County. Because of the nearness of Kern County to Los Angeles, a sizable tonnage moves into the many cities in Los Angeles County. On the whole the Fresno Area is in a good position not only to sources of livestock, but adequate slaughtering facilities.

San Jose Area

The San Jose Area has a wide variety of crops and livestock production operations, including small specialized poultry or fruit farms; large scale range cattle outfits, and extensive specialized operations in the production of vegetables, grains and fruits. Located in the low mountains and foothills of the Coast Range, a great deal of this Area is suitable for livestock grazing. Range cattle are important to the industry, which includes straight cattle operations, the importation of feeders to be grown on native grass and pastures, and feedlot finishing. Counties tributary to the San Francisco Bay and in the Salinas Valley of Monterey County due to large dairy herds, contribute a good supply of veal stock. Concentrated in the more southern counties, beef cattle in the Area approximate about 14 percent of the State's total.

Sheep production is of little importance in the northern half of the Area. A large share of the production is centered in San Benito, Monterey, and San Luis Obispo counties, and the area representing only about 3 percent of the State's total. Hogs during normal times are raised on only a small proportion of the farms, but production is heavy in San Mateo, Monterey, Santa Clara and San Luis Obispo counties. Swine account for almost 15 percent of the production of the State, being heavily weighted with garbage feds in San Mateo County.

The Area has a high percentage of the larger plants, important in the slaughter of hogs and sheep in San Mateo County. The location of plants slaughtering hogs, adjoining San Francisco County, is responsible for this high ratio.

Percent Of State Quota Bases In The Area (Conversion Weight Basis)

<u>No. Slaughterers</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Species</u>
27	7.9	3.9	19.2	21.9	12.6

There are 27 slaughterers in the Area, with a total quota base of 132,044,103 pounds of dressed meats. Fourteen of the plants are in

the Class 1 and 2A type, and are responsible for almost the entire quota bases. Two National Packers, the only ones in Northern California, are located in San Mateo County and account for 85 percent of the hog quota bases. San Mateo County also leads in cattle and lamb quota bases. Santa Clara is next in line in all species of livestock, and Santa Cruz is third in all species. San Benito has the edge on the remaining counties.

The distribution of the quota bases by different species show some wide variations. Cattle are relegated to a low position because of the preponderance of hogs and sheep in San Mateo County.

Percent Distribution Of Quota Bases By Species
(Conversion Weight Basis)

<u>County</u>	<u>No. Plants</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>
San Mateo	5	18.3	.3	22.9	58.5
Santa Clara	6	63.7	5.6	6.5	24.2
Santa Cruz	4	67.1	6.2	6.4	20.3
Monterey	3	57.1	9.5	2.1	31.3
San Benito	2	82.2	7.2	2.6	8.0
San Luis Obispo	7	49.7	16.1	1.3	33.0
Area Average	27	33.3	2.6	17.2	46.9

Hogs dominate in the distribution of species in the quota bases. San Mateo County quota bases are heavily weighted with hogs and practically nil in calves. This county because of its closeness to garbage feed operations and processing facilities of the two National Packers swings the distribution of quota bases in the direction of hogs. Every county is important in distribution of hogs with the exception of San Benito, which ranks first in cattle distribution. Santa Clara swings heavily toward beef following the general distribution of the other counties with the exception of Monterey and San Luis Obispo. Sheep in San Mateo County more important in the distribution than cattle, because of the heavy demand in the Bay area. The calf distribution stays low because of the competition of small killers in the back country.

Every county shows a gain in population with the exception of Santa Cruz. The Area has some very wide differences as between counties in connection with the apparent per capita supply. San Mateo adjoining San Francisco County reveals an unusually high per capita, but an examination of the distribution of the meat products will explain this high per capita.

Relationship Of Quota Bases In The Area To Population

<u>County</u>	<u>Population</u> <u>Nov. 1, 1943</u>	<u>Percent Change</u> <u>Population Since</u> <u>April 1, 1940</u>	<u>Conversion</u> <u>Weight Of</u> <u>All Species</u>	<u>Apparent Per</u> <u>Capita Weekly</u> <u>Supply By Lbs.</u>
San Mateo	136,574	+ 22.2	88,025,160	12.40
Santa Clara	191,811	+ 11.3	20,997,403	2.11
Santa Cruz	43,709	+ 3.0	12,896,743	.56
Monterey	84,802	+ 19.2	3,264,841	.75
San Benito	11,717	+ 2.9	3,755,882	6.15
San Luis Obispo	39,681	+ 19.4	3,104,074	1.50
Total	508,294	+ 14.2	132,044,103	4.99

The two National Packers located in San Mateo County throw the county out of proportion as to its apparent per capita supply. These packers and one large independent are considered a part of the San Francisco Bay trading area. Located in South San Francisco, these three plants do not only have the advantage of the stockyards and the garbage hog feeders, but also the advantage of distributing their products in the heavily populated Bay Area. These plants deliver their products to the cities on both sides of the Bay and down the Peninsula into Santa Clara County. Both National Packers maintain wholesale jobbing houses in San Francisco, catering to the hotel and restaurant trade.

Santa Clara and Santa Cruz disregard county lines in the distribution of their meat products. Like San Mateo County, they cross each others borders and extend their operations into San Francisco, and into the counties on the Oakland side of the Bay. This wide distribution flattens out the high per capita in San Mateo County and brings the low apparent supply of Santa Cruz into the higher levels. Monterey, a deficit county under the quotas, received some help from the apparent high supply in San Benito County. San Luis Obispo County, also a deficit county under the quotas, has a problem of sufficient meat supplies if quotas were again put into effect. Like many other counties, San Luis Obispo became a deficit area when the large packers pulled out of their extended territories.

Los Angeles Area

Great diversity of climate, soil, topography, and agricultural conditions characterize the Los Angeles Area. Parts of the area are mountainous, some in desert, while large tracts of land under irrigation are suitable for agriculture. Rainfall varies from small amounts in the eastern desert sections to an average of 18 inches in the coastal section of Santa Barbara and Ventura counties.

The Area, better known for its production of citrus fruits, walnuts, and vegetables, nevertheless ranks high in the production of livestock. The bulk of the livestock is located in and adjacent to irrigated areas where many specialized operations are carried on. Feed production in the Area is inadequate to care for local livestock requirements, necessitating the importation of substantial quantities of concentrates and hay.

Beef cattle production, representing around 12 percent of the State's total, operates under a variety of conditions. Large-scale herds of range cattle are found mainly in Santa Barbara County. Most of the commercial and private cattle feeding establishments are in Los Angeles County. Most cattle are brought in however from other States, Old Mexico, and other parts of California, since producing beef herds are comparatively scarce locally.

Sheep production is not important, the Area having only about 4 percent of the State's total. Los Angeles County ranks first with about 36,000 head, Riverside second with 27,000 head, San Bernardino third with 21,000 head, and the remainder scattered thinly over the other

counties. Hog production is important with more than 18 percent of California production, and is mainly concentrated in several large-scale specialized establishments in Los Angeles and San Bernardino counties. Those in and near the metropolitan Los Angeles area are limited to garbage feeding. This method of feeding includes extensive use of various kinds of grains.

Not only do quota bases show a high percentage of concentration in this Area, but a high concentration in Los Angeles County. The importance of quota bases in this Area when compared with the State, as have little relationship to the low livestock production of the Area.

Percent Of State Quota Bases In The Area
(Conversion Weight Basis)

No. Slaughterers	Cattle	Calves	Sheep	Hogs	All Species
69	49.7	56.1	44.8	53.1	50.5

There are 69 slaughterers in the Area, with total quota bases of 526,657,821 pounds of dressed meats. This Area has not only the largest number of slaughterers, but the highest percentage of quota bases. The Class 1 and 2A independent, and National Packers share about equal honors in the division of quota bases on the basis of conversion weight. The independent slaughterers operating under this type of license have a decided edge on the beef quotas, more than $1\frac{1}{2}$ to 1, while the National Packers under the same type of license have the advantage in the calf, sheep, and hog quota bases. Almost the entire quota bases of the Area falls in the group operating under either a Class 1 or 2A license, which are concentrated in Los Angeles County. The high concentration of Calves has a direct relationship to the important dairy industry of Southern California.

The distribution of quota bases by different species of livestock is held close to the average of other Areas by the heavy concentration of cattle among the independent packers. Otherwise, the distribution of cattle to the other species would fall sharply below the average of almost every other Area.

Percent Distribution Of Quota Bases By Species
(Conversion Weight Basis)

County	No. Plants	Cattle	Calves	Sheep	Hogs
Santa Barbara	8	470.1	19.0	2.4	8.5
Ventura	2	57.8	10.6	.3	31.3
Los Angeles	43	52.3	8.8	10.3	28.6
San Bernardino	9	75.3	7.4	4.2	13.1
Orange	1	60.8	1.6	5.6	32.0
Riverside	6	57.9	14.9	2.9	24.3
Area Average	69	52.1	9.5	9.9	28.5

The distribution of quota bases by species is influenced by the distribution in Los Angeles County, because of the high concentration of quota bases in that county. Cattle follows just about the same

general pattern of the other Areas. San Bernardino has the highest percentage in the cattle column, achieved at the expense of the other species. Santa Barbara has the next highest rating in cattle, with sheep and hogs playing a minor role. Orange County ranks third in cattle distribution, but moves up to first place in hogs at the expense of calves and sheep. Calf distribution is important in only three counties, while sheep lead in Los Angeles County. The distribution of the hog quota has a fairly uniform percentage in every county with the exception of Santa Barbara and San Bernardino.

Los Angeles County will play the important role in the relationship of quota bases to population. This county being the hub of slaughter operations, likewise has a definite bearing on the meat supplies of the other counties.

Relationship Of Quota Bases In The Area To Population

<u>County</u>	<u>Population</u> <u>Nov. 1, 1943</u>	<u>Percent Change</u> <u>Population Since</u> <u>April 1, 1940</u>	<u>Conversion</u> <u>Weight Of</u> <u>All Species</u>	<u>Apparent Per</u> <u>Capita Weekly</u> <u>Supply By Lbs.</u>
Santa Barbara	74,629	+ 5.8	131,472	.35
Ventura	75,992	+ 9.1	534,646	.13
Los Angeles	3,138,797	+ 12.8	515,063,863	3.15
San Bernardino	185,081	+ 14.9	6,547,268	.67
Orange	153,253	+ 17.2	2,891,176	.36
Riverside	122,335	+ 20.1	425,475	.09
Total	<u>3,749,987</u>	<u>+ 13.0</u>	<u>526,657,821</u>	<u>1.40</u>

This statistical compilation of the apparent per capita weekly supply based on the outstanding quota bases, reveals the reasons for the acute meat shortage in the Los Angeles Area during the period of quotas. The Area was declared a critical price district by the Office of Price Administration for the purpose of attracting meat supplies into the different counties. The low per capita in every county with the exception of Los Angeles, indicates the responsibility of this county to move meat products to them. The difficulties under which packers had to operate caused many of them to pull in their distribution from the more distant markets, bringing chaotic conditions in most parts of every county with the possible exception of Los Angeles.

Meat distribution in Los Angeles County can be likened to a wagon wheel, with Los Angeles as the hub and the other counties as the spokes. Southern California historically has always been a cow and pork market. The slaughter of cows due to the large dairies has been higher in this part of the State, although some packers specialize in the better grades of steer beef. A quick glance at the above table reveals that even with good distribution, Los Angeles County has difficulty in furnishing sufficient meat supplies to every county in the Area. If quotas were again put into effect, the Area would become a critical one again.

San Diego Area

The San Diego Area has a great deal in common with the Los Angeles Area in topography, climate, soil and agricultural pursuits. The climate is mild in San Diego County but Imperial has hot summers. Feed production follows about the same pattern as in the Los Angeles Area, but some portions of the Area, particularly the Imperial Valley, produce hay and grain in excess of their local needs. Practically all such surplus feeds are used in other parts of the Area. Beef cattle production represents about 5 percent of the State's total, with large range herds concentrated in San Diego County. In the Imperial Valley, beef production is primarily a market-finishing process, based upon the use of irrigated pastures, feedlots, and combinations of the two.

Sheep production is not important except in the Imperial Valley where several thousand head of ewes are lambled in early winter, and where many lambs are fattened on pastures each winter. With almost 2 percent of the State's total production, Imperial County has about 83 percent of the Area's production. Hog production is important in Imperial County and to a lesser degree in San Diego. These two counties, comprising the entire Area, have almost 7 percent of the State's production.

This Area, one of least importance in slaughtering facilities, has been one of the most critical meat shortage areas in the State under the quotas.

Percent Of State Quota Bases In The Area (Conversion Weight Basis)

<u>No. Slaughterers</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>	<u>All Species</u>
11	1.6	1.2	.3	1.0	1.2

There are 11 slaughterers in the Area, with a total quota base of 12,778,211 pounds of dressed meats. Four of the plants are either Class 1 or 2A, accounting for almost the entire quota base of the Area. A large portion of the slaughter operation is centered in San Diego County, and the percentage of the quota bases in the Area is very evenly divided between the different species of livestock.

The distribution of quota bases by different species reveals a high percentage in the cattle column, with hogs next in importance.

Percent Distribution Of Quota Bases By Species (Conversion Weight Basis)

<u>County</u>	<u>No. Plants</u>	<u>Cattle</u>	<u>Calves</u>	<u>Sheep</u>	<u>Hogs</u>
Imperial	1	60.1	4.4	3.1	32.4
San Diego	9	69.7	9.7	2.5	18.1
Area Average	11	67.3	8.4	2.6	21.6

This Area is one in which beef slaughter dominates. A large share of the cattle quota is in San Diego County which ranks highest in percentage distribution in this specie of livestock. Calves and sheep are not important in either of the 2 counties. Hogs make up most of the remaining percentage.

This Area having the highest percent increase in population reflected sharply the problem of meat shortages. The following table reveals the relationship to population changes and quota bases.

Relationship Of Quota Bases In The Area To Population

<u>County</u>	<u>Population</u> <u>Nov. 1, 1943</u>	<u>Percent Change</u> <u>Population Since</u> <u>April 1, 1940</u>	<u>Conversion</u> <u>Weight Of</u> <u>All Species</u>	<u>Apparent Per</u> <u>Capita Weekly</u> <u>Supply By Lbs.</u>
Imperial	43,104	- 27.8	3,168,083	1.40
San Diego	394,569	+ 42.9	9,610,128	.46
Total	<u>437,673</u>	<u>+ 30.3</u>	<u>12,778,211</u>	<u>.52</u>

One can readily see the difficulties this Area had under the quota system. While the population was increasing, packers began to pull in their extended territories to their immediate trading areas. A large packer in Arizona withdrew its distribution from California, affecting not only Imperial and San Diego counties but several in the Los Angeles Area. In order to keep barely adequate meat supplies moving into this Area, several of the large packers in Los Angeles shipped a constant supply to these counties. If quotas are again put into effect, critical meat shortages will develop almost immediately. This Area may continue to be one of the most difficult meat areas in the State.

Current Livestock And Meat Situation

The agricultural economy of the State has never been entirely integrated with livestock production, which places the latter in a precarious position during periods of low rainfall. Stockmen have depended upon range grass during winter and spring months to put growth and weight on their cattle, and to fatten the early lamb crop. Livestock producers follow the same general pattern during the summer months, using grass lands in the foothills, and pastures at higher elevations in the late summer. If the pasture fails to mature because of insufficient rains in the floor of the valleys and snow at high elevations, livestock must turn to supplemental feeding or move to market in poor finish.

During a period of national feed shortage, stockmen in California now face the very realistic problem of not only having to winter their livestock, but to finish them for market. After seven years of good rainfall in California with pasture to spare, stockmen are again faced with one of those lean pasture and feed periods which has every indication of developing into one of the worst droughts since 1924. Unless a high degree of organization and timing is

exercised in moving the poorly finished livestock in orderly proportions to market and feedlots, a chaotic condition will develop which may not only cripple the livestock industry, but also create an acute shortage in our meat supply on the Pacific Coast.

Stockmen experienced a poor winter growing season, and spring failed to develop the pastures to a degree which would place their livestock on the market in killing flesh. Therefore, the movement of cattle and lambs to market will be influenced by feed rather than price. Because of the poor condition of the pastures, the shortage and high price of concentrates, it became apparent early in March that a difficult situation was developing, even before the spring feed became a factor. Most observers were of the opinion that the backward growing season would move cattle to market in the greatest numbers during June, and the lambs in May. However, because of the continued cold weather and lack of moisture during the latter part of March and early April, the rapidly drying pastures will drive the cattle to market in May and a larger percentage of the spring lambs in April. This sudden reversal of feed prospects has created a serious and even critical situation. A more detailed discussion of cattle and lambs will reveal the extent and seriousness of the situation.

The largest number of cattle in some years was carried over and placed on winter and spring pastures. Because of poor growing conditions earlier in the winter, it soon became apparent that the ranges were overstocked. It was discovered also that the irrigated pastures were in poor condition. Further, the Ladino clover pastures were contracted for by the sheep men, but they would not be in pasturing condition until late in April. Very few of the cattlemen were successful in securing any pasture, and feeders are apparently not interested unless the price drops to a level in line with feed prices. Stockmen came face to face with a situation which challenged the ingenuity of the entire industry. Everyone began to look for pasture lands throughout the State and the bordering States.

During normal years more cattle would have been in California feedlots, and slaughterers would have begun to cut down on their out-of-State purchases around the month of March. However, because of the shortage of California feedlot cattle, they are continuing to draw heavily upon Denver, and some of the River markets for their fat cattle. It is problematical if the slaughterers will cease their purchase of out-of-State fat cattle and switch entirely to the utility and commercial grass kinds. No doubt they will continue such purchases as long as these fat cattle are available, even at higher prices; and this will be at the expense of the California grass cattle. We may expect, however, a heavy grass cattle movement during the month of May at prices attractive enough to permit them to at least partially abandon their purchase of fat cattle in the mid-west.

Many observers are of the opinion that this movement will go to immediate slaughter unless a feedlot demand can be developed. To create such a demand a much greater price spread must develop between

feeder and fat cattle. Some packers, and other interested persons, are talking about a 4 cent spread, which would place the feeder price around 10 cents. Just as important, food conditions on ranges, particularly in the foothills, higher elevations, and irrigated pastures, will prevent the carrying over of normal cattle numbers to provide a meat supply for late summer and early fall. On the other hand, the feeder cattle market may become so depressed by June that it will encourage heavy feedlot operations. This could develop if the movement of grass cattle becomes so concentrated that slaughter facilities would not be able to handle the supply.

To further complicate the situation, there is a larger than normal calf vealing program. This means that there will be a heavy run of veal around the peak movement of grass cattle. The normal movement of stocker cattle is not anticipated, and the present outlook indicates this class is due for price declines through the summer. The combination of these possibilities threatens our meat supply next winter. Producers are advised to lay in a supply of concentrates and build up their supply of hay because very little old grass can be counted upon for next fall. Taking a closer look at the movement of grass cattle in the different producing areas will reveal the task just ahead.

The estimated movement of grass cattle during the next 4 months will reach a total of almost 423,000 head, an increase of 18 percent over 1943. The largest increase in numbers is centered in the San Joaquin and Sacramento Valleys, ranging from 20 to 25 percent. Since the early movement of these cattle will run largely to feeder flesh, they will be approximately 15 to 20 percent lighter in weight than last year. San Joaquin Valley will furnish 51 percent of the movement, Sacramento Valley 24 percent, the South Coast 21 percent, and the North Coast 4 percent. Twenty percent of them will probably move to market for immediate slaughter or to feedlots during April. Forty percent will move in May, 25 percent in June, and the remaining 15 percent in July.

The vealing program will send to market around 90,000 head over the same period, which is an increase of 28 percent over last year. The largest increase is also centered in the San Joaquin and Sacramento Valleys. Thirty-five percent will go to market in April, 40 percent in May, 20 percent in June, and the remaining 5 percent in July. These calves apparently will reach the peak movement in early May, and perhaps have a tendency to depress the cattle movement. The movement of cattle off grass, and the movement of calves resulting from the vealer program, are only parts of the livestock marketing picture. The spring lamb movement will play a definite rôle in the successful marketing of grass cattle and calves.

The spring lamb outlook is similar to that of cattle. Some are of the opinion that it is far more acute because of the generally poor condition of the lambs and the need for summer feed. Lamb marketings will be largely on a feeder basis. Contracting has been slow on feeders, and many sheepmen will be faced with the necessity of cutting down on ewe bands, especially with full-aged sheep. Many sheepmen will shear lambs this spring and carry them on Ladino clover for late marketing. This will further disturb the feed situation because the competition for summer feed will be extensive between cattle and sheep, and the clover fields are

slow in getting started. Most important in connection with the marketing of spring lambs, besides the poor finish, is that almost the entire crop will come onto the market at the same time.

Spring lambs in the San Joaquin Valley are generally first to come to market, followed a month or so later by those in the Sacramento Valley. Growing conditions were a little more favorable in the San Joaquin Valley, while the grass on the floor and upper end of the Sacramento Valley took a bad turn in late March and early April. Feed conditions will throw the lambs in these two important producing areas onto the market at the same time. Complications have developed in the movement of lambs in the southern half of San Joaquin Valley over to the Mojave Desert. Feed in the desert had a good start, but cold weather prevented favorable grazing conditions and the lambs may not finish out as expected. Like cattle, the spring lambs are faced with the problem of looking for a feeder market.

Feed conditions demand that more than one million head of spring lambs will have to move during the next 6 weeks. These lambs in contrast to the crop last year will run high into the lower grades and feeder class. The early trade estimate places around 50 percent of the total crop in commercial grade for slaughter or further feeding. Only 20 percent of them will reach the good and choice grade for immediate slaughter. The remaining 20 percent are either classed as light feeders or culls for slaughter. The whole spring lamb deal is predicated upon the outlets which may develop for feeder lambs; otherwise, complications beyond the control of the producers may have a tendency to demoralize the entire marketing of the spring lamb crop.

Outstanding among these dislocating factors is the one of timing the marketings before the run of grass cattle. Every bit of evidence points to the fact that unless the lamb crop is moved through marketing channels during the next 30 days it will run headlong into the cattle run. Should this situation develop to a moderate degree, lamb marketings for immediate slaughter would come to a complete halt. The 20 percent good and choice grades will present no problem. The bottleneck will center around the 50 percent commercial grades for slaughter and feeders. If the bulk of these commercial grades finds no outlet to feedlots in the mid-west, they are more than likely to come into competition with grass cattle for slaughter facilities.

The lack of manpower will decide the maximum slaughter capacity, and most people feel that cattle will get the slaughter facilities in preference to lambs, once the consumer has had his fill of the latter. Attempts have been made to reduce the points on lamb for a period of 6 weeks; nevertheless, it is still imperative that a goodly number of them move to feedlots in the mid-west. The move would insure a supply of fat lambs for consumers in other parts of the country, and it is the only economic procedure to follow in connection with the conservation program of meat supplies. No doubt feeder lambs will have to move at prices in line with feed costs and supplies. Nevertheless, whatever bottlenecks present themselves against moving more lambs to feed, the step will have to be taken. Otherwise, cattle and lambs will glut the market and a meat famine would be in the offing later in the summer and early fall.

Summarizing the grass cattle situation in California, it is apparent that the shortage of feed will be the main factor during the remainder of 1944 rather than price. To insure an adequate supply of beef later in the year, at least 200,000 head of grass cattle will have to go to feedlots for further finishing. To accomplish this feeding operation, at least 120,000 tons of concentrates and 100,000 tons of roughage will be needed. This movement to feedlots will have to take place immediately; otherwise many small producers will begin marketing, which will not only unnecessarily depress the price for slaughter and feeder stock but glut the slaughter facilities as well. Feeder prices will either have to be in line with feed costs, or the operators will stay out of the market until the price is driven down.

Spring lambs follow the same general pattern, with the exception that they have temporarily the first opportunity for slaughter facilities. Corn belt feeders are aware of feed conditions and poor finish of the lambs, and have taken the position that the California producer will be forced to sell his feeders at depressed prices. Furthermore, these feeders have been advised by corn belt interests to pass up the Northern California lambs because they do not feed as well as those in the San Joaquin Valley. If these lambs do not receive any attention from mid-western buyers most of them will have to go through slaughter. Despite the bearish attitude of these buyers at this time, large numbers will have to go to feedlots.

Both classes of livestock will, therefore, and at the same time move to the slaughter house unless immediate steps are taken to fill the feedlots. There are no cold storage facilities to build up an inventory of meat products. Slaughtering capacity at the moment is predicated upon available manpower. A drastic reduction or suspension of points will not solve the situation. The suspension of points on beef, for example, would only create a feast for a few months and a famine during the remainder of the year. The whole situation centers around a realistic view of the problem on the part of the producer, slaughterer, and feedlot operator. The present short-sighted approach to the problem will only further aggravate an already critical situation.

Conclusion

We feel that this rough outline of the problems of livestock production and meat distribution will provide you with a working knowledge to cope with the problems that come to the surface daily. With this basic material and the current situation at the present moment, you will be in a better position to furnish us with accurate changes that are taking place. Such changes would include, among other things, the condition of range feed, supply of dry feed, condition of lambs and cattle, feeder prices, movement to feedlots, movement of feeders to other States, reduction in livestock numbers, labor in slaughter houses, and similar economic facts. Mr. T.C. Perry is responsible for the excellent job of developing the statistical material. Mr. Russell Leake and the other members of the Livestock and Meats Division gave material assistance to Mr. J. Edgar Dick in preparing the outline for your use.





